NOTE, BY E. B. SEITZ.—The value of g, in Mr. Baker's solution, p. 25, may be found as follows:

Let $g = u_n$; then $u_n = u_{n-1} \pm 1$ . . . (1), and $u_{n-1} = u_{n-2} \mp 1$, . . . (2) the upper sign being used when n is odd, and the lower when n is even. Adding (1) and (2), we have $u_n - u_{n-1} - 2u_{n-2} = 0$, an equation in Finite Differences, whose solution gives $u_n = C_1.2^n + C_2(-1)^n$. . . . . (3)

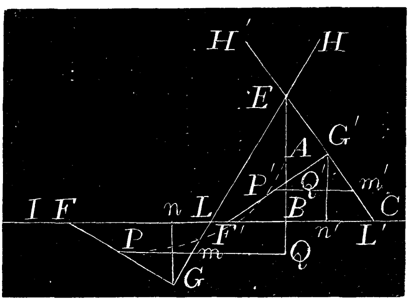
When $n = 1$, $u_1 = 2C_1 - C_2 = 1$ . . . (4), and when $n = 2$, $u_n = 4C_1 + C_2 = 1$ . . . (5). From (4) and (5) we find $C_1 = \frac{1}{3}$, and $C_2 = -\frac{1}{3}$; therefore $g = u_n = \frac{1}{3}(2^n \pm 1)$, the double sign being used as above. Hence the angles of the nth triangle are

$$\tfrac{1}{3}\pi \pm (\tfrac{1}{2})^n(\tfrac{1}{3}\pi - A), \quad \tfrac{1}{3}\pi \pm (\tfrac{1}{2})^n(\tfrac{1}{3}\pi - B), \quad \tfrac{1}{3}\pi \pm (\tfrac{1}{2})^n(\tfrac{1}{3}\pi - C).$$

[Mr. Baker has sent a "Revised Solution" of the question, in which he represents g by the same formula obtained above, and also notices the error in the table, pointed out by Prof. Johnson, but our space will not permit its publication.]

ANSWER TO QUERY (SEE P. 176, VOL. IV), BY THE EDITOR.

FROM the fixed point E draw a line EAB perpendicular to the fixed line CI and intersecting it in B, at any distance a from the point E, and let A represent the middle point of EB.



Let FGH be any position of the right angle, the side GH intersecting the line CI in L, and let the fix'd length of $GE = a$; then, to find the locus of P, the middle point of GF, draw PQ perpend'ular to AB, intersecting the side GH in m; draw Gn perpendicular to CI, and put $AQ = x$ and $PQ = y$.

Because $AE = \frac{1}{2}a$, $EQ = \frac{1}{2}a + x$, and $BQ = \frac{1}{2}a - a + x = x - \frac{1}{2}a$; $\therefore$ $Gn = 2(x - \frac{1}{2}a)$ and $Fn = \sqrt{\{a^2 - [2(x - \frac{1}{2}a)]^2\}} = \pm 2\sqrt{(x^2 - ax)}$.

Hence, from the similar triangles FnG and EQM, and FnG and PGm,

$$Fn : Gn :: EQ : Qm, \text{ or } 2\sqrt{(x^2 - ax)} : 2(x - \tfrac{1}{2}a) :: x + \tfrac{1}{2}a : Qm = \frac{x^2 - \frac{1}{4}a^2}{\sqrt{(x^2 - ax)}},$$

$$Fn : FG :: PG : Pm, \text{ or } 2\sqrt{(x^2 - ax)} : \quad a \quad :: \quad \tfrac{1}{2}a \quad : Pm = \frac{\frac{1}{4}a^2}{\sqrt{(x^2 - ax)}}.$$

But $Qm + Pm = y = \dfrac{x^2 - \frac{1}{4}a^2}{\sqrt{(x^2 - ax)}} + \dfrac{a^2}{\sqrt{(x^2 - ax)}} = \dfrac{x^2}{\sqrt{(x^2 - ax)}}$; $\therefore$ $y^2 = \dfrac{x^3}{x - a}$, which is the equation to the cissoid.